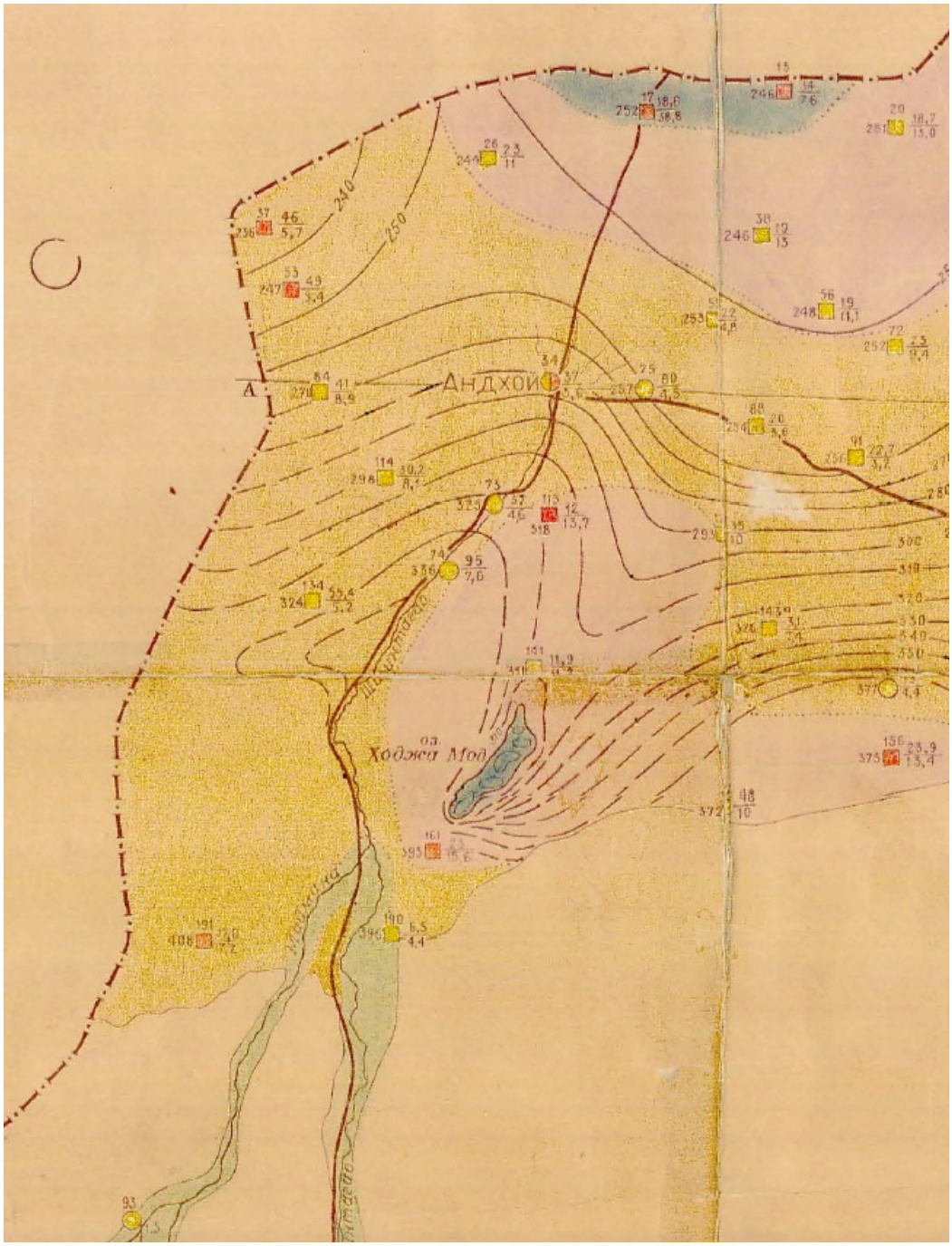
NORPLAN

Course 1.7. Practical 2.

Using older Soviet Maps

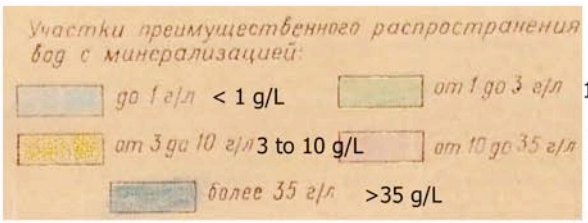
Take a look at Mishkin's hydrogeological map. The key is on the next page:



1. What mineralisation do you expect in groundwater in the Quaternary aquifer at Andkhoi? Does the groundwater get more or less salty as you travel north?

NORPLAN

Map legend



Characteristic areas of water mineralisation

< 1 g/L

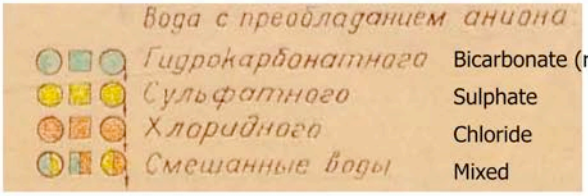
1 to 3 g/L

3 to 10 g/L

10 to 35 g/L

>35 g/L

Hydroisohypses (groundwater head contours), at 10 m intervals, absolute elevation



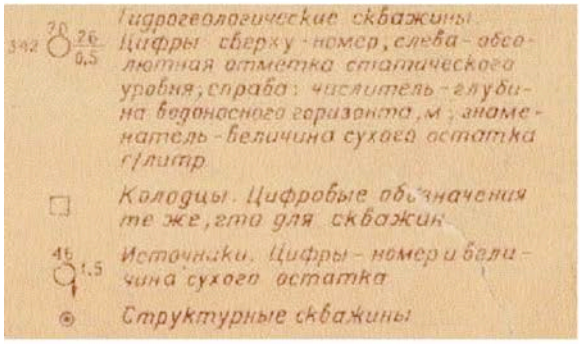
Dominant anion composition of waters

Bicarbonate (respectively boreholes, dug wells, springs)

Sulphate

Chloride

Mixed



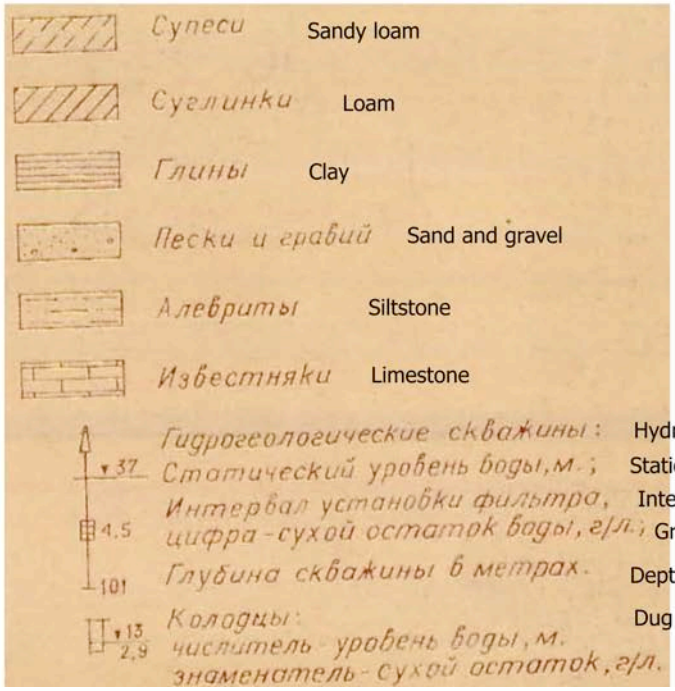
Hydrogeological drilled borehole
Numbered: (above) well number
(left) absolute static water level (m asl)
(right) numerator: depth to water-bearing horizon (m)
denominator: dry residue (g/L); i.e. mineralisation

Dug well. Numbering system as for boreholes

Spring. Numbered: (above) spring number
(right) dry residue (g/L); i.e. mineralisation

Structural borehole

Section legend



Sandy loam

Loam

Clay

Sand and gravel

Siltstone

Limestone

Hydrogeological borehole

Static water level (m bgl)

Interval of filter placement

Groundwater dry residue in g/L

Depth of borehole in m

Dug well

Numerator: water level (m)

Denominator: water dry residue in g/L

2. If the typical ground level in Andkhoi is m above sea level, how deep would you expect the water table to be?

3. What is the typical mineralisation along the course of the Shirin Tagab and Maimana Rivers. Can you think of an explanation for this?

4. In what direction does the groundwater flow? Does it flow towards the rivers or away from them?

5. Find borehole number 74 along the Shirin Tagab River:
   - What is the static groundwater level?
   - What is the depth to the main aquifer horizon?
   - What is the water's salinity?

Next, take a look at the old Soviet topographic map 200k--j41-29.gif